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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,386	12/27/2000	John S. Sadowsky	42390P9858	6353

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EXAMINER

PATHAK, SUDHANSHU C

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/750,386	SADOWSKY, JOHN S.	
	Examiner	Art Unit	
	Sudhanshu C. Pathak	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 3rd, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on July 14th, 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-to-27 are pending in the application.

Drawings

2. Fig. 2 discloses element "57" to be a filter (Specification, Page 7, lines 13-14), however the symbol used in the figure to represent the element "57" is an amplifier.

Corrective Action is required.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words.

Applicant is reminded of the proper content of an abstract of the disclosure. A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

4. Applicant is reminded of the proper content(s) of the disclosure.

Content of Specification

- (a) Title of the Invention
- (b) Cross-References to Related Applications
- (c) Statement Regarding Federally Sponsored Research and Development
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

Art Unit: 2634

- (1) Field of the Invention
- (2) Description of the Related Art
- (f) **Brief Summary of the Invention**: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s)
- (h) Detailed Description of the Invention
- (i) Claim or Claims
- (j) Abstract of the Disclosure

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 7-9 & 16 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding to Claims 7-9 & 16, the claims disclose a local oscillator coupled to the modulator, the specification discloses this in Fig. 2 and Specification, Page 9, lines 16-23, however it is not clear as to how in a 1bit A/D converter the ASK modulator may reduce to a BPSK modulator. Furthermore, it is not clear as to

what (how) the local oscillator signal is implemented in the ASK modulator. The specification makes no mention of this.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 10-12, 14, 17-21, 23 & 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Pellon (5,392,042).

Regarding to Claims 1-3, 10-12, 14, 17-21, 23 & 25-27, Pellon discloses a portable communication device (Column 1, lines 15-22 & Column 11, lines 12-20 & Column 20, lines 20-40) comprising an analog-to-digital converter to provide a digital output signal (Fig. 2a, element 210 & Column 3, lines 3-19 & Column 4, lines 27-43); a signal generator coupled to the digital output signal to generate a feedback signal (Fig. 2a, elements 218, 206, 201b & Column 3, lines 9-14 & Column 4, lines 7-48 & Column 12, lines 29-38); and wherein the portable communication device is adapted to subtract the feedback signal from an intermediate frequency (IF) signal (Fig. 2a, elements 202, 254, 206, 201b, 203 & Fig. 10, elements 1026, 700 & Column 2, lines 51-68 & Column 11, lines 16-18 & Column 20, lines 26-40 & Column 21, lines 40-51). Pellon also discloses the portable communication device further comprising a filter adapted to provide a filtered signal with a bandwidth, wherein the signal generator generates a feedback signal that reduces the difference between the IF

Art Unit: 2634

signal and the feedback signal over at least a portion of the bandwidth of the filtered signal (Abstract, lines 1-18 & Fig. 2a, element 204, 202 & Column 1, lines 35-50 & Column 2, lines 51-68 & Column 3, lines 3-5 & Column 4, lines 7-21 & Column 5, lines 63-68 & Column 11, lines 11-20 & Column 12, lines 12-29 & Fig. 10, elements 1024, 1026, 700 & Fig. 7a & Column 20, lines 20-60). Pellon also discloses the portable communication device further comprising an integrator coupled to receive the subtracted signal (Fig. 2a, element 204 & Fig. 2b & Column 2, lines 57-68 & Column 3, lines 20-38 & Column 7, lines 14-40). Pellon also discloses the portable communication device further comprising an antenna adapted to receive a radio frequency signal (Fig. 10, element 1020), and the received RF signal is converted to an IF signal inputted into the apparatus (Fig. 10, elements 1024, 1026, 700). Pellon also discloses the portable communication device further comprising a storage medium having stored instructions to execute the processing of the received signal (Fig. 10, element 1030).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5-6, 15, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pellon in view of Sklar (Sklar, B; Digital Communications, Fundamentals and Applications; Chapter 3, Page 128-129; Copyright 1988, Prentice Hall).

Regarding to Claims 5-6, 15, 22, Pellon discloses a portable communications device comprising an analog-to-digital converter to provide a digital output signal; a signal generator coupled to the digital output signal to generate a feedback signal; and wherein the portable communication device is adapted to subtract the feedback signal from an intermediate frequency (IF) signal as described above. However, Pellon does not specify the signal generator to be a modulator and wherein the signal generator further comprises an amplitude shift key modulator.

Sklar discloses that an ASK modulator which functions as an On-Off keying modulator (Page 129, Fig. 3.5 ©). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Sklar teaches implementing an ASK modulator as a switching device and this is analogous to the switching device as described in Pellon, thus satisfying the limitation of the claim.

11. Claims 4, 7, 9, 13, 16, & 24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Pellon in view of Sklar (Sklar, B; Digital Communications, Fundamentals and Applications; Chapter 3, Page 128-129; Copyright 1988, Prentice Hall) in further view of Ko et al. (6,577,674).

Regarding to Claims 4, 7, 13, 16 & 24, Pellon in view of Sklar discloses a portable communications device comprising an analog-to-digital converter to provide a digital output signal; a signal generator coupled to the digital output signal to generate a feedback signal wherein the signal generator further comprises a modulator; and wherein the portable communication device is adapted to subtract the feedback signal from an intermediate frequency (IF) signal so as to reduce the

difference between the received IF signal and the feedback signal as described above. Pellon further discloses the ADC resolution (number of output bits) can vary depending on the sampling rate to reduce quantization noise (Column 1, lines 65-68 & Column 2, lines 1-15 & Column 4, lines 11-25 & Column 6, lines 36-58). However, Pellon in view of Sklar does not disclose a multiplier adapted to multiply a local oscillator and the received signal.

Ko discloses a receiver in a mobile station comprising a multiplier and a local oscillator (Fig. 1) wherein the incoming signal is down converted to a baseband signal for further processing and retrieving the transmitted data (message) (Fig. 1 & Column 2, lines 26-48). Ko further discloses further sampling the down converted signal for digitally processing the received signal for accurate retrieval (Fig. 1 & Column 2, lines 1-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that it is possible to implement the multiplier and local oscillator as described in Ko in the receiver as described in Pellon in view of Sklar so as to further down convert the bandpass filtered IF frequency signal to baseband for accurate sampling and demodulating and this also couples the oscillator to the signal generator which is in the feedback loop. Furthermore, coupling the local oscillator to the modulator can be implemented so as to upconvert the baseband signal to the IF frequency in the feedback loop as described in Pellon in view of Sklar, thus satisfying the limitations of the claims.

Response to Arguments

12. Applicant's arguments filed on May 23rd, 2005 have been fully considered but they are not persuasive.

In regards to the arguments presented regarding the drawing the objection to the drawings still stands. The examiner agrees with the applicant that Fig. 2 represents a block diagram of the functional elements and not the circuit representation (Remarks, OBJECTIONS, Drawings, lines 3-4). However, the examiner disagrees with the applicant that a block diagram of a filter/amplifier is commonly designated in such a block diagram in the form of a triangle with a single input (Remarks, OBJECTIONS, Drawings, lines 5-6). The examiner is also aware that an amplifier also inherently includes a filter i.e. the functionality of the desired characteristics of the amplifier has a defined bandwidth, thus it filters the signals not in the desired bandwidth, however this is represented as a triangle and referred to as an amplifier and further described with its frequency characteristics. A triangle block is not referred to as a filter, which has it's own block diagram a square block specifying the type of filter. A conventional block symbol for a filter is shown in

www.eecg.toronto.edu/~kphang/ece1371/rfreceiver.pdf (Page 2, Fig. 1, elements LNA, BPF).

In regards to the arguments presented regarding the 112 1st, Paragraph rejection the examiner does not doubt the truth or accuracy of the disclosure. However, the examiner maintains that the subject matter in the specification does not describe in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims disclose a

Art Unit: 2634

local oscillator coupled to the modulator, the specification discloses this in Fig. 2 and Specification, Page 9, lines 16-23, however it is not clear as to how in a 1bit A/D converter the ASK modulator may reduce to a BPSK modulator. Furthermore, it is not clear as to what (how) the local oscillator signal is implemented in the ASK modulator. The specification makes no mention of this.

In regards to the arguments presented regarding the 102(b) rejection that the Pellon (5,392,042) does not disclose the limitation "wherein the portable communication device is adapted to subtract the feedback signal from an IF signal". This limitation is disclosed in the Pellon reference in (Abstract, lines 1-18 & Fig. 2a, element 204, 202 & Column 1, lines 35-50 & Column 2, lines 51-68 & Column 3, lines 3-5 & Column 4, lines 7-21 & Column 5, lines 63-68 & Column 11, lines 11-20 & Column 12, lines 12-29 & Fig. 10, elements 1024, 1026, 700 & Fig. 7a & Column 20, lines 20-60).

In regards to the arguments presented regarding the 103(a) rejection that the applicant is unaware of any reason, the skilled artisan would replace the switches disclosed with a modulator. Sklar discloses that an ASK modulator which functions as an On-Off keying modulator (Page 129, Fig. 3.5 ©). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Sklar teaches implementing an ASK modulator as a switching device and this is analogous to the switching device as described in Pellon, thus satisfying the limitation of the claim.

The examiner also notes that the amendment dated above does not address the specification objection regarding "**Brief Summary of the Invention**".

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)-272-3056
- The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2634

- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sudhanshu C. Pathak



SHUWANG LIU
PRIMARY EXAMINER

8/5/05